

WATER-SOLUBLE TETRAZOLIUM COMPOUND AND DETERMINATION OF REDUCING SUBSTANCE USING SAID COMPOUND

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Abstract

NEW MATERIAL:The water-soluble tetrazolium compound of formula I (R1 and R2 are H, lower alkyl, lower alkoxy, halogen, cyano or nitro; R3 is lower alkyl, lower alkoxy or halogen; R4 is H or lower alkyl; R5 is lower alkylene; Y is H, lower alkyl, lower alkoxy, halogen or nitro).

EXAMPLE:The compound of formula II.

USE:The quantity of a reducing substance such as reduced nicotinamide-adenine dinucleotide or reduced nicotinamide-adenine dinucleotide phosphate can be determined by the use of the compound. The activity of reductase and dehydrogenase can be determined from the quantity of the above substances and the compound is useful for the determination of biotic component and an additive in a food.

PREPARATION:The compound of formula I can be produced e.g. by condensing m-nitrobenzenesulfonyl chloride with 2-aminoethanesulfonic acid and subjecting the condensation product to several processes such as reduction.

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